Immunology; An Introduction (3rd Edition); by Ian R. Tizard, Saunders College Publishing (Harcourt Brace Jovanovich); Fort Worth, 1992; xvi + 527 pages. £ 31.50, $ 52.00.

This book is an excellent introduction to the vast body of information which makes up modern immunology. The arrangement of the book is very clear. Each chapter begins with an outline of the covered topics followed by a more detailed listing of the chapter contents which also provides a useful summary for revision. There is a comprehensive set of thought-provoking questions at the end of each chapter and a good selection of useful references. Throughout the text, the author briefly describes fundamental experiments that have proved to be of major importance in the development of immunology. This clearly illustrates the experimental nature of immunology. There are boxes (termed "A Closer Look") which describe in more detail interesting aspects of the topic described in the chapter.

For the most part, the chapters are concise and well written, with a lucid description of the relevant material. The text contains many tables and diagrams. The diagrams giva a very good visualization of the concepts under discussion. The approach to depicting antibodies and other biological molecules, although simplified, serves to demonstrate the key principles involved and could easily be reproduced by students for examination. The tables are clear and concise. There are many photographs and electronmicrographs. Some of the photographs are lacking in clarity but, in general, they are well chosen to further illustrate the textual material. There is a very good glossary at the end of the book and a readily accessible abbreviations list inside the front-cover.

For those involved in the teaching of analytical immunology, the coverage of experimental methodology would not be sufficient, but the author states that this was not one of his aims. However, the basis of many key methods are described and the text will provide a good starting point for further study.

The chapters related to "Lymphokines and Cytokines", "Complement", "Immunoglobulin Diversity" and "AIDS" are particularly well written and cover these complex and rapidly developing fields in a clear and 'user friendly' manner.

Overall this is a very good introductory immunology text which should prove very useful to students, provide new approaches to lecturing staff and give insights to anyone wishing to be updated on the expanding field of immunology.

Richard O'Kennedy

Molecular Databases for Protein Sequence and Structural Studies: An Introduction; by John A.A. Sillince and Maria Sillince, Springer-Verlag; Berlin, 1991; xvi + 236 pages. DM 98.00.

The ability to handle large quantities of data efficiently is a common need in many areas of biological research, and the advent of computer-based systems as a tool for tackling the problem has enabled many of us to gain a truly global perspective on the data. This is particularly so in the areas of molecular sequence and structure analysis where the various genome sequencing projects promise a vast increase in the amount of sequence data available for general use.

In this book the authors identify several key areas which are not well covered in the literature: the broad scientific context of molecular databases, an introduction to the computational aspects, the chemical background of molecular information and a summary of the latest developments.

Beginning with an introduction to protein and nucleic acid structure (one chapter) the authors move on to computer-based research tools for molecular science, ranging over online databases in biochemistry, expert systems, sequence databanks, structure databanks and sequence searching. The final chapter, a case study ("Specification of [an] Expert System for Protein Structure Prediction"), draws on a survey administered to research scientists in the UK and USA who were asked for details on current procedures and problems involved in protein structure prediction; this chapter summarises the response to the questionnaire.

In order to assess the utility of the book to the research scientist one must ask what contribution it makes that is not already made either by reviews (e.g. R.F. Doolittle (Ed.) *Molecular Evolution: Computer analysis of protein and nucleic acid sequences* (1990) Methods in Enzymology, vol. 183) or more practically oriented introductions (e.g. M.J. Bishop and C.J. Rawlings (Eds.) *Nucleic acid and protein sequence analysis* (1987) IRL Press). It is certainly not as exhaustive as the former and yet does not provide the level of practical detail expounded by the latter. The emphasis is rather on computational details of database design – relational and objected oriented forms are described – and especially on methods of substructure searching.

It is a pity that such a promising title should yield so little information of general use to the molecular biologist: it is probably of more use to the information scientist entering the biological sequence area and requiring an overview.

David J. Parry-Smith
